REMARKS

Claims 1-20 are now pending in the present application. Applicants have amended claims 11 and 16. No new matter has been introduced by the amendment. In particular, support for amended claims 11 and 16 can be found at page 3, lines 7-11 and page 8, line 25 through page 10, line 3 including Table 1 at page 9.

Reconsideration of the application, as amended, is requested in view of the following remarks:

Rejection under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 11-20 under § 112, first paragraph for lack of support in the specification such that one skilled in the art would be enabled to practice the claimed invention. More specifically, it is the Examiner's position that the claimed methods are not credible in view of the clinical data presented in Table 1 of the specification. See the Office Action, pages 2 and 3, part 3.

Claims 11 and 16, the two independent claims, will be discussed first. Claim 11 is drawn to a method of determining whether a subject with squamous cell carcinoma and maspin gene expression above a threshold level has a lymph node containing cancerous cells. Claim 16 is drawn to a similar method where maspin gene expression is below a threshold level. As correctly pointed out by the Examiner, the clinical data (see page 9, Table 1) indicate that the level of maspin gene expression inversely correlates with the presence of cancerous cells in lymph node. See the Office Action, page 2, part 3. Therefore, Applicants have changed "**has** a lymph node containing cancerous cells" in claim 11 to "**does not have** a lymph node containing cancerous cells." Likewise, Applicants have also changed "**does not have** a lymph node containing cancerous cells" in claim 16 to "**has** a lymph node containing cancerous cells." These changes have placed the methods of claims 11 and 16 in agreement with Table 1 in the specification.

For the amendments and reasons set forth above, Applicants submit that claims 11 and 16, as well as claims 12-15 dependent from claim 11 and claims 17-20 dependent from claim 16, are adequately enabled by the specification, and the Examiner's rejection should be withdrawn.

Rejection under 35 U.S.C. § 102(a)

The Examiner further rejected claims 1-10 under § 102(a) as being anticipated by Xia *et al.* (Oncogene (May 11, 2000), Volume 19, pages 2398-2403). See the Office Action, page 3, part 5. Applicants respectfully traverse.

Note that Xia *et al.* was published less than a year before the filing date (August 11, 2001) of the present application. It lists eight co-authors: Weiya Xia, Yiu-Keung Lau, Mickey C-T Hu, Lei Li, Dennis A Johnston, Shi-jie Sheng, AK El-Naggar and Mien-Chie Hung. Only three of the co-authors, Weiya Xia, Yiu-Keung Lau, and Mien-Chie Hung, are named as co-inventors in the present application. The other five co-authors, Mickey C-T Hu, Lei Li, Dennis A Johnston, Shi-jie Sheng, and AK El-Naggar did not make conceptual contributions to the subject matter described and claimed in this application, and hence are not named as co-inventors. See Declaration of Dr. Mien-Chie Hung submitted herewith under 37 C.F.R. § 1.132. As such, Xia *et al.* discloses Applicants' own work, and therefore does not constitute "prior art under § 102(a) even though it has been disclosed to the public in a manner or form which otherwise would fall under § 102(a)."[1] *In re Katz*, 215 USPQ 14, 17 (CCPA 1982).

For the reasons set forth above, Applicants submit that Xia *et al.* does not qualify as a § 102(a) bar for claims 1-10, and request withdrawal of this rejection.

Rejection under 35 U.S.C. § 103(a)

The Examiner further rejected claims 1-10 as being unpatentable over Sager *et al.* (US Patent 5,470,970) in view of Ding *et al.* (Proceedings of the American Association of Cancer Research, 1996, Vol. 37, page A627) and either Gregory *et al.* (US Patent 5,932,210) or Hung *et al.* (US Patent 6,197,754). See the Office Action, page 4, part 8. Applicants disagree.

Claims 1 and 6, the two independent claims, will be discussed first. Both claims cover methods of predicting a relative probability of survival for a subject with squamous cell carcinoma according to the expression level of the maspin gene. See the specification, e.g., page 3, lines 7-11 and page 10, lines 4-9.

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[1] As pointed out by the Katz court, "[a] literal reading might appear to make a prior patent or printed publication 'prior art' even though the disclosure is that of the applicant's own work. However, such an interpretation of this section of the statute would negate the one year period afforded under § 102(b) during which an inventor is allowed to perfect, develop and apply for a patent on his invention and publish descriptions of it if he wishes." *Id.*, at 17.

None of the prior art references cited by the Examiner discloses such a prediction method. Specifically, the primary reference, Sager *et al.*, teaches methods of determining the level of maspin gene expression at either the protein level or at the mRNA level. It does not mention that the level of maspin gene expression can be used to predict the relative probability of survival for a subject with squamous cell carcinoma. The secondary reference, Ding *et al.*, teaches that maspin gene is commonly over-expressed in squamous cell carcinomas, yet it does not disclose that the level of maspin gene expression is associated with the probability of survival for a subject with squamous cell carcinoma. Finally, both Gregory *et al.* and Hung *et al.* teach a gene therapy method for treating cancer patients. Neither of them mentions a prognostic method, i.e., predicting a relative probability of survival for a subject with squamous cell carcinoma according to the expression level of the maspin gene.

Since none of the prior art references cited by the Examiner refers to a method of predicting a relative probability of survival for a subject with squamous cell carcinoma according to the expression level of the maspin gene, their combination, in whatever manner, does not render obvious the claimed prognostic methods, which are based on maspin gene expression levels. In other words, claims 1 and 6 are patentably distinguishable over the cited art.

By the same token, claims 2-5 depend from claim 1 and claims 7-10 depend from claim 6, are also distinguishable over the cited art, since "[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious." *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

Applicants submit that the grounds for rejection asserted by the Examiner have been overcome, and that claims 1-20, as pending, define subject matter that is novel, nonbovious, and fully enabled. On this basis, it is submitted that allowance of this application is proper, and early favorable action is solicited.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Please apply any charge to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 11-2-01

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Version with markings to show changes made

In the claims:

Claims 11 and 16 have been amended as follows:

11. A method of determining whether a subject with squamous cell carcinoma [has] does not have a lymph node containing cancerous cells, the method comprising:

determining a level of maspin gene expression in a biological sample from a subject with squamous cell carcinoma; and

comparing the level with a threshold level of maspin gene expression, wherein a level of maspin gene expression in the biological sample above the threshold level indicates that the subject [has] does not have a lymph node containing cancerous cells.

16. A method of determining whether a subject with squamous cell carcinoma [does not have] has a lymph node containing cancerous cells, the method comprising:

determining a level of maspin gene expression in a biological sample from a subject with squamous cell carcinoma; and

comparing the level with a threshold level of maspin gene expression, wherein a level of maspin gene expression in the biological sample below the threshold level indicates that the subject [does not have] has a lymph node containing cancerous cells.